What is Claimed Is:

1. A microfluidic device comprising:

A) a substrate and

B) a channel on the substrate, the channel comprising a side wall, wherein the side wall comprises a polymeric material, the side wall is formed by deposition of a plurality of microdroplets comprising the polymeric material from a nozzle.

2. The microfluidic device of claim 1 wherein the channel further comprises a cover comprising the polymeric material.

3. The microfluidic device of claim 1 wherein the channel also comprises a bottom comprising the polymeric material.

4. The microfluidic device of claim 1 wherein the device further comprises an overhang structure comprising the polymeric material, wherein the overhang structure comprises a base positioned over the substrate and an extension extending from an end of the base opposite the substrate, the extension being substantially parallel to the substrate.

5. The microfluidic device of claim 1 wherein the microdroplets of the polymeric material comprise a polymer solution, a polymer suspension, or a combination thereof.

6. An injection molding master for fabricating a molded microfluidic device, the master comprising:

A) a substrate and

B) a channel on the substrate, the channel comprising a side wall, wherein the side wall comprises a polymeric material, the side wall is formed by deposition of a plurality of microdroplets comprising the polymeric material from a nozzle.

7. The master of claim 6 wherein the master reflects a positive representation of the molded microfluidic device.

8. The master of claim 6 wherein the master reflects a negative representation of the molded microfluidic device.

9. A process of making a pattern of microfluidic device features on a substrate, the process comprising:

forming said pattern by emitting microdroplets of a polymeric material from a nozzle onto the substrate to form a deposited pattern on the substrate.

10. The process of claim 9 wherein the pattern of microfluidic device features on said substrate forms an injection molding master for producing a molded microfluidic device, and the process further comprises:

curing the polymeric material forming said deposited pattern to form the injection molding master.

11. The process of claim 10 wherein the deposited pattern is a positive representation of the molded microfluidic device.

12. The process of claim 11 further comprising electroforming a metal onto the injection molding master to form a metallic mold.

13. The process of claim 10 wherein said deposited pattern is a negative representation of the molded microfluidic device.

14. The process of claim 9 wherein emitting the microdroplets of polymeric material is performed by an ink-jet printer.

15. The process of claim 9 wherein the substrate is mounted on a translation device, wherein the translation device moves the substrate to form the pattern of microfluidic features from the microdroplets of polymeric materials emitted from the nozzle.

16. The process of claim 9 comprising forming an overhang structure in the pattern of microfluidic features, forming the overhang structure comprises forming a base positioned over the substrate and an extension extending from an end of the base opposite the substrate, the extension being substantially parallel to the substrate.

17. The process of claim 9 comprising forming a channel in the pattern of microfluidic features.

18. The process of claim 17 comprising forming a channel bottom, a channel sidewall and a channel cover.

19. The process of 18 wherein the sidewall and the cover are formed from the same polymeric material.

20. The process of claim 19 wherein the bottom, the sidewall and the cover are formed from the same polymeric material.

21. The process of claim 9 wherein forming the deposited pattern comprises depositing the microdroplets of polymeric material in a first area and depositing microdroplets of a second polymeric material from the nozzle in a second area of the substrate.

22. The process of claim 21 wherein the deposited microdroplets of polymeric material in the first area and the second polymeric material comprise the same polymeric material.

23. The process of claim 21 wherein the microdroplets of polymeric material deposited in the first area are not soluble in a solvent that solubilizes the second polymeric material.

24. The process of claim 21 further comprising a step removing the first polymeric material.

25. A microfluidic device comprising a device substrate and a channel, wherein the channel comprises a bottom and a sidewall, said device formed by

A) preparing an injection molding mmaster, wherein preparing the injection molding master comprises forming a negative impression of the channel by emitting microdroplets of a polymeric material onto a injection molding master substrate;

B) injecting a second polymeric material into the injection molding master;

C) curing the second polymeric material to form the microfluidic device; and

D) removing the microfluidic device from the injection molding model.